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US 4288006 A

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## (54) Partitioned container with rotatable dispensing closure

(57) A portable milk powder container comprises a container body 2, a fixed ring 3, and a rotatable top 4 with a capped outlet 42, the container body being divided into partitions 23, the ring being screw threadedly fixed around the body opening, and the top being rotatably held in a groove 32 in the inner surface of the ring. The top may have two protruding points 43,44 which clamp onto the top of a partition such that the desired quantity of the milk powder contained in any partition may be dispensed. The container body has a handling recess 21.

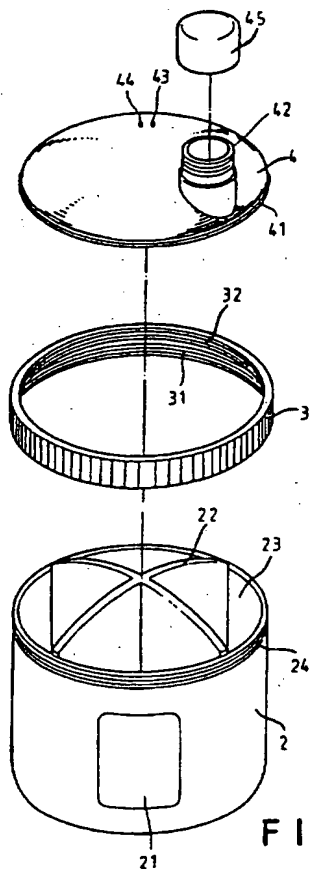


FIG. 2

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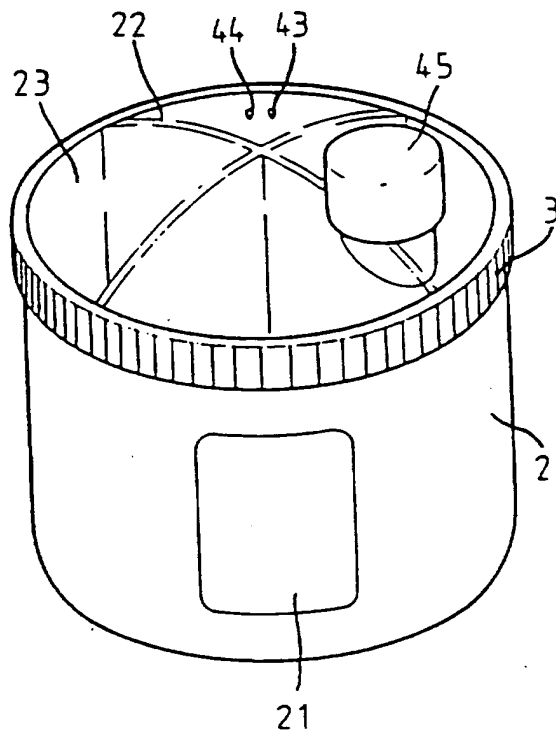


FIG. 1

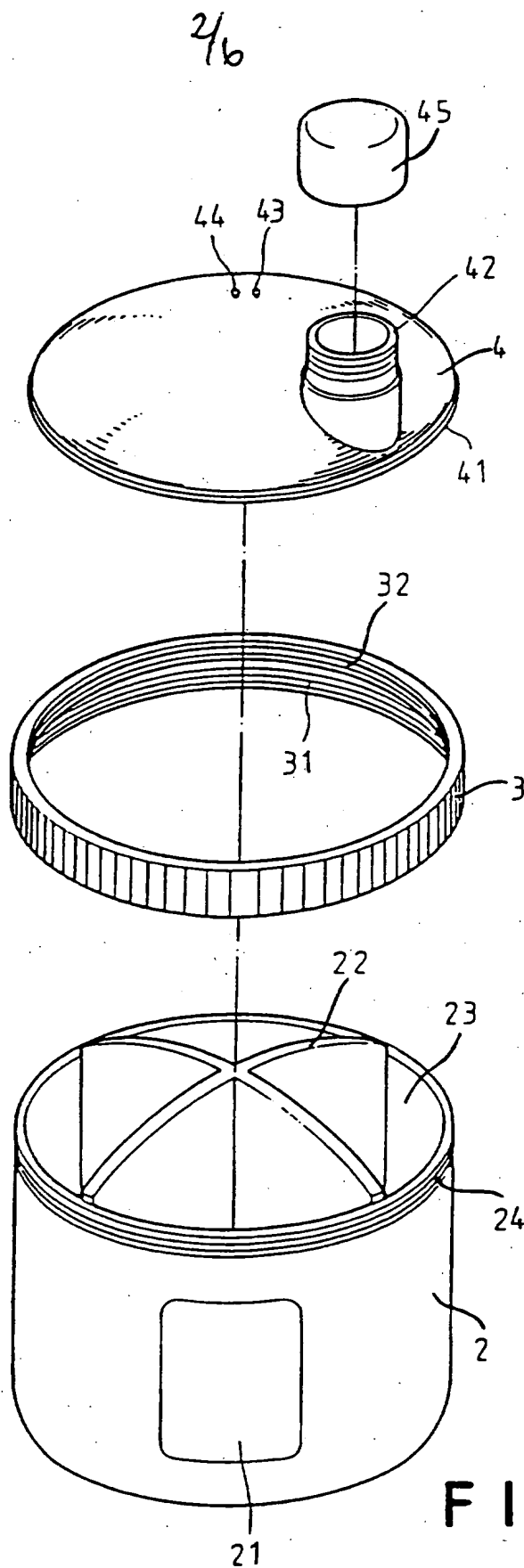


FIG. 2

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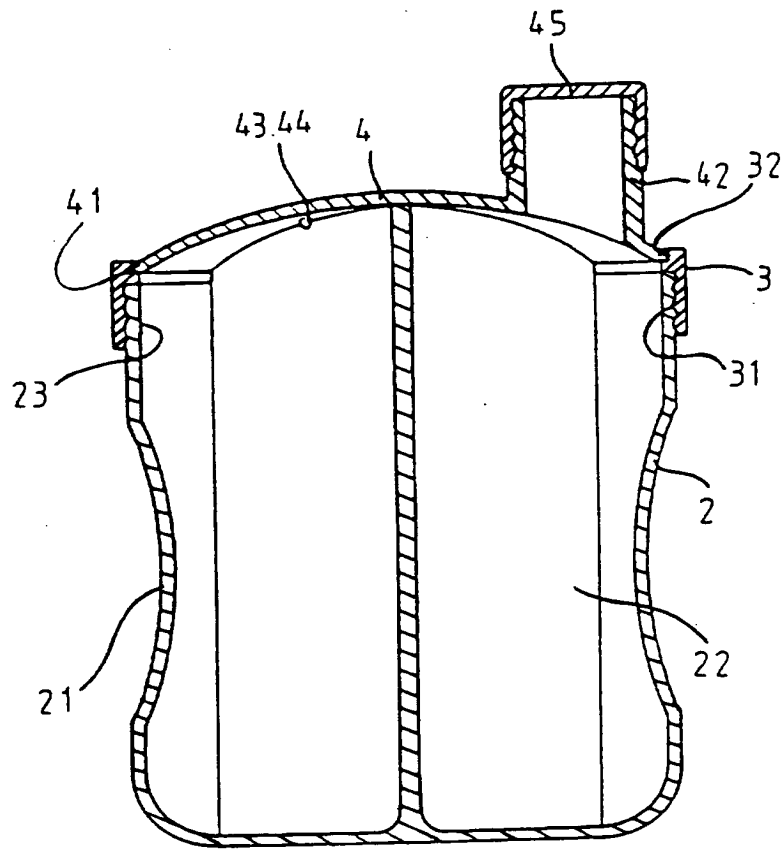


FIG. 3

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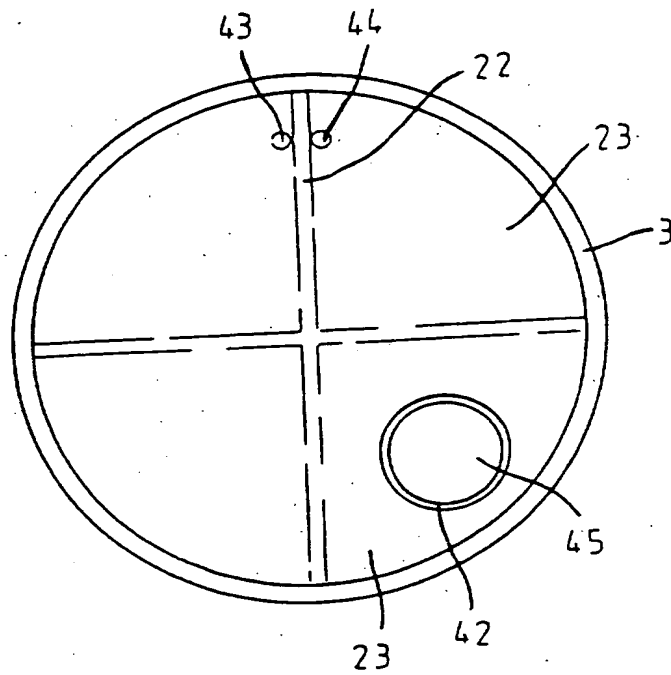


FIG. 4

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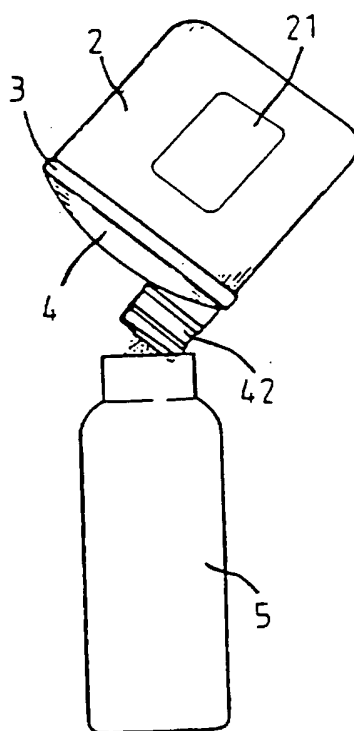


FIG. 5

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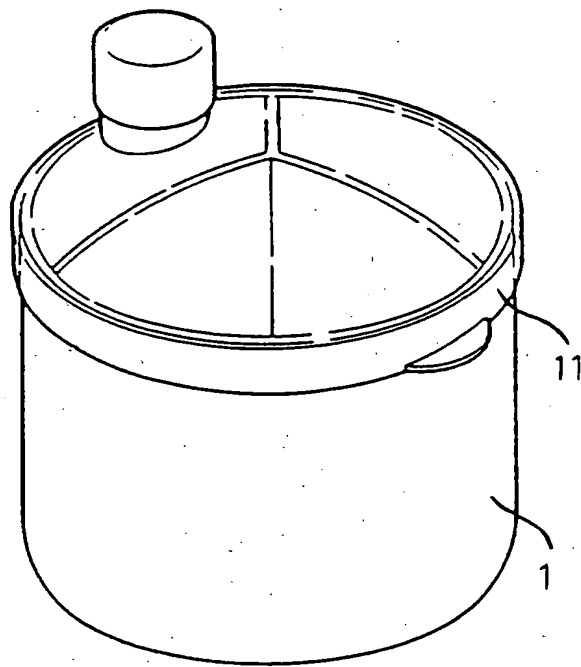


FIG. 6

## TITLE: A PORTABLE MILK POWDER CONTAINER

This invention is related to a portable milk powder container.

This invention which is related to a portable milk  
5 powder container characterized by controllable dispensing  
quantity, especially a partitioned container with a  
turning top, can dispense milk powder as much as desired.

Traditionally, housewives measure milk powder with  
measuring dippers when preparing milk for babies. In this  
10 way, they have to stand the trouble caused by occasionally  
wrong memorized quantity of the powder and the lost powder  
dropped out of milk bottles when pouring the milk from  
measuring dippers. besides, when a mother goes out with  
her baby for longer time, she has to bring with her a  
15 proper quantity of milk powder. Currently, a kind of milk  
powder box 1 as shown in FIG. 6 is used, in which proper  
partitions are fixed to contain specific quantities milk  
powder. This box is closed with a cover 11 which should  
be turned along the outer rim of the opening of the box  
20 when milk powder is poured out of a partition. But as



this closed cover should be tight enough to hold the container, one should use considerably great force to pull the cover when separating them. As a result, either a loose or a tight cover may cause the contained powdered milk to drop out of the box or mix with that in another partition.

This invention is related to a portable milk powder container.

The primary object of this invention is to provide a portable milk powder container which is controllable dispensing quantity and mainly comprises a properly partitioned container whose opening is fixed with a fixed ring so that a turning top held by said ring can be turned within it when allowing the milk powder in one partition to come out from the outlet of said turning top.

Another object of this invention is to use said turning top to stop partitioned powder from mixing with each other when its turning is stopped by two protruding points at its bottom holding the top of the partition board.

To further understanding, this invention is described in detail with the drawings and the embodiments as follows.

Other objects of the invention will in part be  
5 obvious and in part hereinafter pointed out.

The invention accordingly consists of features of constructions and method, combination of elements, arrangement of parts and steps of the method which will be exemplified in the constructions and method hereinafter  
10 disclosed, the scope of the application of which will be indicated in the claims following.

FIG. 1 is a perspective view of the present invention;

FIG. 2 is an exploded view of the present invention;

15 FIG. 3 is a sectional view of the present invention;

FIG. 4 is a top view of the present invention;

FIG. 5 illustrates a schematic drawing showing the operating embodiment of the present invention; and

FIG. 6 illustrates a prior art milk powder box.

20 For purpose to promoting an understanding of the

principles of the invention, reference will now be made to the embodiment illustrated in the drawings. Specific language will be used to describe same. It will, nevertheless, be understood that no limitation of the scope of the invention is thereby intended, such alternations and further modifications in the illustrated device, and such further applications of the principles of the invention as illustrated herein being contemplated as would normally occur to one skilled in the art to which the invention relates.

As shown in FIGS. 1 and 2, this invention comprises a cylindrical container 2, in which the surface coming in symmetrically concave design 21 facilitates holding; the interior is properly divided into plural partitions 23 with partition boards 22 and the outer rim of its opening comes in screw 24 design to receive a fixed ring 3 with screw lock 31 biting the opening; a circular 20 groove 32 is designed along the rim of the fixed ring 3 above the screwed lock 31 so that the circular flange 41 of a tuning top 4 can be inserted into the groove 32 of the fixed ring

3 and thus the turning top 4 can move within the fixed ring 3 and leave its outlet 42 with a lid 45 staying at the top of any partition 23 of the container 2 while the protruding points 43, 44 at its bottom clamps the top of the partition board 22. With this result, the powdered milk contained in such partition 23 can come out from the outlet 42 with no possibility of mixing with that contained in other partition 23.

As show in FIG. 3, the circular groove 32 along the internal rim of the fixed ring 3 so tightly gears with the circular flange 41 of the turning top 4 that the protruding points 43, 44 at the bottom of the turning top 4 can exactly clamp the top of the partition board 22 while the turning top 4 moves within the fixed ring 3; what's more important, one can easily move the top of the can by screwing off the ring without any force before replenishing a partition with powdered milk and has no trouble of dropping any milk out of the container or mixing the milk of different partitions as what one does with a traditional powdered milk box.

Referring to FIG. 4, when the tuning top 4 moves and leaves its outlet 42 above any partition 23, the protruding points 43, 44 at its bottom stick the top sides of the partition board 22 and fix the outlet 42 exactly at  
5 the needed position without the danger of leaving the outlet 42 on between two partitions 23; besides, the protruding points 43, 44 can be easily detached from the partition board 22 and the turning top 4 is moved when only as little force is applied.

10 As shown in FIG. 5, the milk bottle 5 can be filled with a specific quantity of powdered milk only when the outlet 42 of this invention is fixed at a right position.

In view of the above description, this invention, whose partitioned container with a turning top moving  
15 within a fixed ring makes it convenient for carrying and easily dispense a specific quantity of powdered milk and, what's more important, ensures firm containing of the powder in every partition, is a new creation and thus application for patent is filed pursuant to Patent Law  
20 accordingly and your careful examination is heartily

requested therefor.

The invention is naturally not limited in any sense to the particular features specified in the forgoing or to the details of the particular embodiment which has been  
5 chosen in order to illustrate the invention. Consideration can be given to all kinds of variants of the particular embodiment which has been described by way of example and of its constituent elements without thereby  
10 departing from the scope of the invention. This invention accordingly includes all the means constituting technical equivalents of the means described as well as their combinations.

## CLAIMS:

1. A portable milk powder container comprising:

a cylindrical container, in which its surface comes in symmetrically concave design for the convenience of holding, on the external rim of its opening comes in thread design and the interior is divided into multiple partitions to contain powdered milk;

a fixed ring having its inside diameter a little larger than that of the opening, in which the bottom of its internal rim comes in screwed lock design so that it is fixed around the opening; the top of the ring comes in groove design; and the external rim comes in plural lineal groove design for the convenience of holding and turning;

a turning top in which an upright outlet is fixed at its edge; the top rim of the outlet comes in thread design to receive a lid; and its surrounded circular flange is inserted into the

circular groove of the fixed ring so that it  
can move within the fixed ring;

whereby with the combination of the  
above-mentioned members, the turning top can be moved so  
5 that its outlet can stay at the top of any partition and  
dispense a specific quantity of milk powder.

2. A portable milk powder container as claimed in  
Claim 1, wherein the turning top has two protruding points  
symmetrically fixed at its bottom which clamp the top of a  
10 partition board when the outlet of the turning top reaches  
a proper position of the partition so as to make a  
specific quantity of milk powder currently dispense.



**Patents Act 1977**  
**Examiner's report to the Comptroller under Section 17**  
**(The Search report)**

Application number  
 GB 9500140.0

**Relevant Technical Fields**

(i) UK Cl (Ed.N) B8T (TWJ); B8D (DSC2)

(ii) Int Cl (Ed.6) B65D 47/26, 83/04, 83/06

Search Examiner  
 LINDA HARDEN

Date of completion of Search  
 13 FEBRUARY 1995

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE; WPI

Documents considered relevant following a search in respect of Claims :-  
 1-2

**Categories of documents**

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|--|---|
| <p><b>X:</b> Document indicating lack of novelty or of inventive step.</p> <p><b>Y:</b> Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p><b>A:</b> Document indicating technological background and/or state of the art.</p> | <p><b>P:</b> Document published on or after the declared priority date but before the filing date of the present application.</p> <p><b>E:</b> Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p><b>&amp;:</b> Member of the same patent family; corresponding document.</p> |
|--|---|

Category	Identity of document and relevant passages	Relevant to claim(s)
A	US 4288006 (W M CLOVER) see Figures 2 and 3	

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